Press Release

April 23, 2025
Kuroda Precision Industries Ltd.

【New Product Announcement】

Sale of Motor Core Ideal for Flying Mobility Begins!

Kuroda is pleased to announce that we will start selling the "Motor Core Ideal for Flying Mobility" from April 2025. This new product has been developed to ensure stable takeoff and long flight for flying mobility, featuring characteristics of small size, lightweight, and high power output.

【Product Overview】

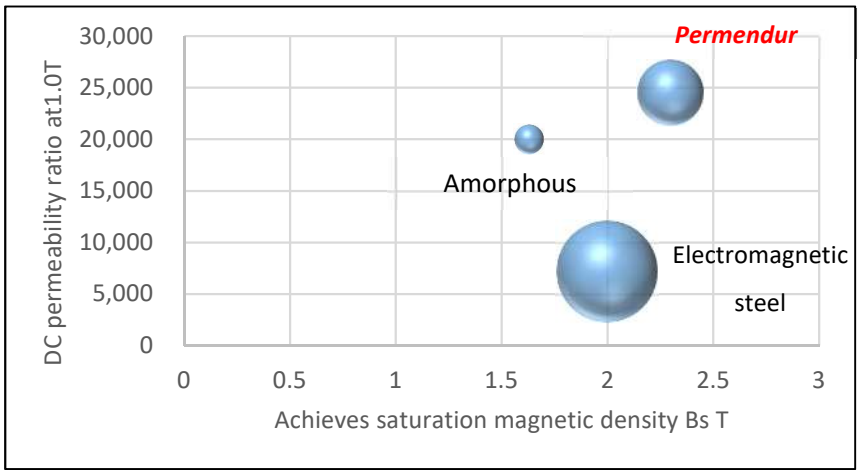
The Motor Core Ideal for Flying Mobility uses Permendur (cobalt-iron alloy) materials with higher magnetic flux density, higher permeability, and lower iron loss compared to conventional electromagnetic steel materials, achieving smaller size, lighter weight, and higher power output. It is ideal for flying mobility applications that require lighter weight for long-duration flights.

Key Features:

- Higher Power Output: Achieves saturation magnetic flux density Bm(T) of 2.475, stacking ratio of 99%
- Adaptable for various sizes: Material thickness t=0.05mm-0.25mm, Stack height ≦125mm & diameter ≦φ400
- Material Supply: Annealing Permendur materials will be supplied by Kuroda.

【Background of Product Development】

While Permendur materials have the characteristics of higher magnetic flux density, higher permeability, and lower iron loss as shown in Figure 1 compared to conventional electromagnetic steel materials, the annealing process is required to achieve these properties. In the past, the mass production was impossible due to the lack of the lamination technology for single Permendur sheets after annealing, Kuroda has developed and commercialized the world’s first high-speed external adhesive laminating technology for the purpose of using Permendur materials.



*The size of each circles of the above materials represents the amount of iron loss.

Figure 1 Material Characteristics of Permendur

【Expected Effects of this New Development】

By using Permendur materials in the commercialized mass production, it is expected to expand the range of specifications and performance that were not achievable with conventional electromagnetic steels or amorphous materials and to significantly contribute to the promotion and spread of flying mobility over the world

Figure 2 Model Diagram of Flying Mobility

【Scheduled Start of Sales】

Sales will start from April 2025.

＊Please contact us separately for details on sales regions and specifications.

＊Please note that this information is subject to change without prior notice.

【Contact Information】

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